

ANALYST:		VPDES NO	
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Parameter: Total Residual Chlorine
Method: Titrimetric, Iodometric, or Amperometric Back (Iodine Titrant)
04/01

METHOD OF ANALYSIS:

	18th EDITION OF STANDARD METHODS-4500-CL C
	EPA METHODS FOR CHEMICAL ANALYSIS-330.2

	Y	N
1) Is PAO or thiosulfate normality 0.00564N? [SM-3.c; 330.2-5.1]		
2) If thiosulfate is used, is it standardized daily? [SM-3.c]		
3) If thiosulfate is used, is it standardized correctly? [SM-3.c]		
4) Is iodine titrate normality 0.0282N or, if not, is correction made? [SM-3.h; 330.2-5.4]		
5) Is iodine standardized or checked against PAO daily? [SM-3.h; 330.2-5.4]		
6) Is iodine standardized correctly? [SM-4.g; 330.2-5.12]		
7) Is iodine stored in amber bottles or in the dark, protected from sunlight and contact with rubber? [SM-4.h; 330.2-5.4]		
8) Is reagent standardization documented? [Permit]		
9) Are reagents free of contamination or growths? [Permit]		
10) Are reagents within their indicated shelf lives? [Permit]		
11) Is 200 mL of sample used? [SM-4.a.1; 330.2-6.1.4]		
12) Is 5 mL of PAO or thiosulfate used? [SM-4.a.2; 330.2-6.1.1]		
13) Is KI added? [SM-4.b.3; 330.2-6.1.2]		
14) Is 4 mL acetate buffer added? [SM-4.a.2; 330.2-6.1.3]		
15) Is at least 1 mL starch solution added? (disregard for Amperometric titration) [SM-4.b.3; 330.2-6.1.6]		
16) Is titrant added until the first appearance of blue color that persists after complete mixing (disregard for Amperometric titration)? [SM-4.b.3; 330.2-6.1.7]		
17) Is titrant added until pointer deflects upscale and does not return to its original position (Amperometric titration)? [SM-4.b.1; 330.2-6.2.3]		
18) Is final volume of titration recorded? [SM-4.b.1; 330.2-6.1.7; Permit]		
19) Is the sample value calculated correctly? [SM-5; 330.2-7] $\text{TRC (mg/L)} = \frac{(A - 5B) \times 200}{C}$ A = mL 0.00564N reductant B = mL 0.0282N I ₂ C = mL sample		

PROBLEMS: